

REMARKS

Claims 1, 15, 17, 24, 29, 44 and 46 have been amended to clarify the invention, and to better define the invention over the prior art. No new matter has been entered by any of the foregoing amendments.

The rejection of claims 15 and 16 under 35 USC §112 as failing to comply with the written description requirement, as well as the corrected drawing requirement is in error. The Examiner suggests FIG. 8 shows the third lamination stack 41 is only orthogonal to one other lamination stack 27. FIG. 8 shows a top view of the motor. As can be seen from FIG. 8, the lamination stack 41 is horizontally configured, wherein the first and second lamination stacks 25, 27 are vertically configured. The horizontal configuration is orthogonal to the vertical configured. One having ordinary skill in the art will recognize the horizontal lamination stack 41 is orthogonal to the vertical lamination stacks 25, 27. The Applicants request withdrawal of this rejection and the drawing objection.

The rejection of claims 23 and 26 under 35 USC §112 as failing to comply with the written description requirement, as well as the corrected drawing requirement likewise is in error. The rejection of these claims on page 3 of the current office action cites to orthogonal lamination stack limitations. Claims 23 and 26 do not have limitations regarding lamination stack orientation, but are limited to coil orientation. Page 11, line 8, of the original filed application specifies the first and second lamination stacks 25, 27 have parallel horizontal slots 37. Page 19, line 9 of the original filed application specifies the third lamination stack 41 has vertical slots 45. As these slots 37, 45 are filled by their respective coils, one skilled in the art would recognize that the coil filling the vertical slots

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE
SUITE 140
TUCSON, AZ 85718
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

is orthogonal to the coils filling the horizontal slots. Thus, the Applicants request withdrawal of this rejection and the drawing objection.

Turning to the art rejections and considering first the rejection of claims 1-12, 15-26, and 44-46 under 35 USC §102(e) as being anticipated by US Patent Publication No. 2002/0053849 to Corcoran, claim 1 requires “each of said lamination stacks is without a complimentary, similarly positioned lamination stack on an opposing side of said output shaft.” The Examiner refers to the device shown in FIG. 21 of Corcoran. In Corcoran FIG. 21, lamination stack 714C has a complimentary, similarly positioned lamination stack (714A) on an opposing side of the output shaft. Thus, Corcoran cannot be said to anticipate claim 1 of the present application or claims 2-12, 15, and 16, which depend from claim 1.

Claims 17, 24, 44, and 46 require “each of said stator coils is without a complimentary, similarly positioned stator coil on an opposing side of said output shaft.” The Examiner refers to the device shown in FIG. 21 of Corcoran. Corcoran FIG. 21 does not show coils as required by Applicants’ claims. In FIG. 21, the coil that would be attached to lamination stack 714C has a complimentary, similarly positioned coil on the lamination stack (714A) on an opposing side of the output shaft. Thus, Corcoran cannot be said to anticipate claims 17, 24, 44, and 46 of the present application or claims 18-23, 25, 26, and 45, which depend from claims 17, 24, and 44.

The rejection of claims 1, 17, 24, and 44 under 35 USC §102(e) as being anticipated by US Patent No. 7,061,466 to Moore, *et al* (hereinafter “Moore”) also is in error. Claims 1, 17, 24, and 44 require that said rotor includes at least one magnet disposed thereon, the magnet being movable along said interior curved surface of said

HAYES SOLOWAY P.C.
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FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
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lamination stacks *in directions defining at least first and second degrees of freedom.*

Moore does not teach a magnet on a rotor movable along the interior curved surface of lamination stacks in multiple degrees of freedom, rather teaching a first magnet inside a first stack (70a) movable along one degree of freedom along the stack and a second magnet inside a second stack (70b) movable along one degree of freedom along the second stack.

As Moore does not teach all elements of claims 1, 17, 24, and 44, it cannot be said to anticipate these claims.

The rejection of claims 29 under 35 USC §102(e) as being anticipated by US Patent No. 7,061,466 to Moore, *et al* (hereinafter “Moore”) also is in error. Claim 29 requires the first and second lamination stacks having interior surfaces facing the rotor. Moore does not teach two lamination stacks facing a rotor having multiple degrees of freedom. Each lamination stack faces an element attached to the rotor that has one degree of freedom. As Moore does not teach all elements of claim 29, it cannot be said to anticipate claim 29.

Claim 46 is limited to urging a magnet to rotate in multiple planes. Moore does not teach a magnet rotating along the multiple planes. As Moore does not teach all elements of claim 46, it cannot be said to anticipate claim 46.

None of the remaining cited references overcome the shortcomings of Moore. Thus claims 1, 17, 24, 29, 44, and 46 should be allowed as the references fail to teach all elements of these claims and, further, claims 2-16, 18-23, 25, 26, 30, 31, and 45 should be allowed as depending from allowable claims.

Further, claim 3 is erroneously rejected as anticipated by Moore. Claim 3 requires an interior curved surface substantially defining a portion of a sphere. The interior curved surface of Moore is cylindrical, not spherical. The Examiner argues that a cylinder is

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE
SUITE 140
TUCSON, AZ 85718
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

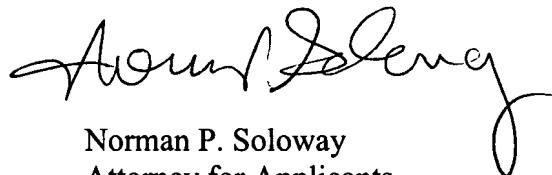
circular and a circle is a portion of a sphere. However, a cylinder is curved in only two dimensions, and as such does not define a portion of a sphere which is curved in three dimensions. Thus, the cited reference fails to teach all limitations of claim 3.

Further, claims 10, 20, and 25 were erroneously rejected as obvious based on Moore in view of German patent DE 19501439 to Deeg et al. The Examiner stated on page 9 that the Deeg reference was DE 19501439 and on page 12 indicated FIG. 17 and 18 of Deeg taught faceted magnets. The Examiner is incorrect. DE 19501439 is four pages and contains only one drawing, so it is unclear what the Examiner is looking at with respect to the cited figures. Further, the specification of Deeg fails to mention anything about faceted magnets. One having ordinary skill in the art would view FIG. 1 of Deeg to contain lines demonstrating curvature of the surface, not faceted magnets. Deeg teaches cylindrical magnets, not faceted magnets. Thus, the cited references fail to teach all limitations of claims 10, 20, and 25.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action is respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



Norman P. Soloway
Attorney for Applicants
Reg. No. 24,315

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE
SUITE 140
TUCSON, AZ 85718
TEL. 520.882.7623
FAX. 520.882.7643

Customer No. 27,667

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567



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HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE
SUITE 140
TUCSON, AZ 85718
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567